

## **AMENDMENTS TO THE SPECIFICATION:**

Please amend the specification as follows:

Please amend the title of this application at page 1, lines 2-3, as follows:

**MAGNETORESISTIVE HEAD HAVING MAGNETORESISTIVE FILM**  
**INCLUDING FREE LAYER AND PINNED LAYER ARRANGED IN HEAD HEIGHT**  
**DIRECTION AND RECORDING-REPRODUCING APPARATUS**

Please amend the paragraph beginning at page 32, line 8, as follows:

It is desirable for the hard biasing layers 59, 61 to be electrically isolated from the magnetization free layer 25 by the insulating films layers 9 and 11, as shown in FIGS. 12A and 12C. It is possible to use, for example,  $\text{Al}_2\text{O}_3$  or  $\text{SiO}_2$  for the insulating ~~layer~~ layers 9, 11, 13, and 65. It is desirable for each of the insulating layers 9 and 11 interposed between the hard biasing layers 59, 61 and the magnetization free layer 25 to have a thickness falling within a range of between about 2 nm and about 10 nm. In order to ensure the insulating properties, it is necessary for each of the insulating layers 9 and 11 to have a thickness of at least about 2 nm. The thickness of each of the insulating layers 9 and 11 should not exceed about 10 nm in order to ensure the biasing magnetic field.

Please amend the paragraph beginning at page 34, line 11, as follows:

In FIG. 12B, the magnetization pinned layer 63, provided under insulating layer 65 and upper magnetic shield 67, is formed thicker than the magnetization free layer 1. In this case, the antiferromagnetic film is formed thicker than the magnetization pinned layer in the magnetization pinned layer 63. If the thickness of the antiferromagnetic film is increased sufficiently, it is possible to further elevate the blocking temperature at which the exchange coupling between the antiferromagnetic film and the ferromagnetic

film disappears, or it is possible to obtain a greater exchange coupling. This may be interpreted due to the fact that the crystallinity, i.e., (111)-orientation and increase in the crystal grain size, can be controlled by increase in the thickness of the antiferromagnetic film so as to stabilize the magnetization of the antiferromagnetic film.

Please amend the paragraph beginning at page 36, line 2, as follows:

In the present embodiment, the magnetization free layer 1 and the magnetization pinned layer 5 are connected to the same surface of the nonmagnetic intermediate layer 3. As far as a satisfactory electric connection can be achieved, it is sufficient that the magnetization free layer 1 and the magnetization pinned layer 5 are connected partly to the nonmagnetic intermediate layer 3 and the electrical connection remains insulated by insulating layers 13, 65, and 71.

Please amendment the Abstract as indicated in the attached sheet.